

EXHIBIT B

Supplemental Expert Report of Owen Astrachan,

dated June 26, 2020

PUBLIC REDACTED VERSION

UNITED STATES DISTRICT COURT

DISTRICT OF NEVADA

ORACLE USA, INC., et al.,

Plaintiffs,

v.

RIMINI STREET, INC., et al.,

Defendants.

Case No. 2:10-cv-00106-LRH-VCF

**SUPPLEMENTAL EXPERT REPORT OF
PROFESSOR OWEN ASTRACHAN
IN RESPONSE TO SURREBUTTAL REPORT OF BARBARA
FREDERIKSEN-CROSS**

June 26, 2020

HIGHLY CONFIDENTIAL—ATTORNEYS' EYES ONLY



Professor Owen Astrachan
Dated: June 26, 2020

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. MS. FREDERIKSEN-CROSS'S SURREBUTTAL REPORT COMMITS MORE FUNDAMENTAL ERRORS	2
1. FUNDAMENTAL ERROR #1: ACCUSING COPYING OF FILES WITH NO ORACLE INTELLECTUAL PROPERTY	2
1.1 [REDACTED] I Did Not Contend Were Examples Of Fundamental Error #1, But Are Instead Examples Of Other Fundamental Errors.....	3
1.2 Ms. Frederiksen-Cross Is Wrong [REDACTED]	5
1.3 Files Ms. Frederiksen-Cross Contends Contain Oracle Code	7
2. FUNDAMENTAL ERROR #2: ACCUSING COPYING WITHIN A SINGLE CLIENT	11
3. FUNDAMENTAL ERROR #3: REFERRING TO “COPYING” WHEN TWO FILES ARE MODIFIED SEPARATELY	13
4. FUNDAMENTAL ERROR #4: REFERRING TO “SENDING,” “PROVIDING,” OR “DISTRIBUTING” WHEN NOTHING IS TRANSFERRED	14
5. FUNDAMENTAL ERROR #5: ACCUSING THE USE OF KNOWLEDGE AND KNOW-HOW ..	15
6. FUNDAMENTAL ERROR #6: MISREPRESENTATION OF DERIVATIVE WORKS	23
7. FUNDAMENTAL ERROR #7: MISREPRESENTING INJUNCTION PROHIBITIONS.....	24
III. MS. FREDERIKSEN-CROSS'S NEW OPINIONS REGARDING CLOUD ENVIRONMENTS ARE TECHNICALLY UNSOUND AND SPECULATIVE	25
IV. MS. FREDERIKSEN-CROSS CONTINUES HER ERRORS WITH RESPECT TO RIMINI'S JD EDWARDS SUPPORT SERVICES	31
V. MS. FREDERIKSEN-CROSS'S OPINION REGARDING DISPLAY ADAPTER MEMORY IS ERRONEOUS	33

I. INTRODUCTION

1. I have been retained by Gibson, Dunn & Crutcher LLP and Rimini Street, Inc. (“Rimini”) as a technical expert in this post-trial proceeding. I previously submitted a Rebuttal Expert Report on March 13, 2020 (“Rebuttal Report”)¹ in response to the Opening Expert Report of Oracle’s expert, Barbara Frederiksen-Cross.

2. After my Rebuttal Report was submitted, Ms. Frederiksen-Cross submitted three additional reports: (1) A “Post-Injunction Surrebuttal Expert Report” and Exhibit A thereto on May 20, 2020; (2) a “Corrected” opening report on May 21, 2020, which contained a new exhibit number 135; and (3) a “Corrected Post-Injunction Surrebuttal Expert Report” on June 12, 2020 (“Surrebuttal Report”).²

3. I have been asked to evaluate these additional reports. This Supplemental Report provides my opinions regarding certain of the new issues raised in Ms. Frederiksen-Cross’s Surrebuttal Report and new Exhibit 135 submitted with her Corrected Opening Report (“Opening Report”).³ This Supplemental Report does not address every opinion raised in Ms. Frederiksen-Cross’s additional reports served since my Rebuttal Report. To the extent this report does not address any issue or opinion raised by Ms. Frederiksen-Cross’s Surrebuttal Report, that does not mean I agree with the opinion. I reserve the right to respond further to Ms. Frederiksen-Cross’s surrebuttal opinions. Additionally, to the extent Ms. Frederiksen-Cross provides additional opinions or analyses, I reserve the right to respond.

4. My experience and qualifications are stated in my Rebuttal Report. In addition to the materials listed on my materials considered list in my Rebuttal Report, I reviewed Ms. Frederiksen-Cross’s Corrected Opening Report, Surrebuttal Report, the exhibits attached to each, the documents cited therein, and ORCLRS1360924, which is a newly produced Oracle file

¹ Citations to my Rebuttal Report served on March 13, 2020 are identified as “R1 Astrachan Rebuttal Rpt.”

² Citations to Ms. Frederiksen-Cross’s Corrected Post-Injunction Surrebuttal Report, served on June 12, 2020 are identified as “R1 Frederiksen-Cross Surrebuttal Rpt.”

³ Citations to Ms. Frederiksen-Cross’s Corrected Opening Report served on January 31, 2020 are identified as “R1 Frederiksen-Cross Opening Rpt.”

incorporated into Exhibit A to Ms. Frederiksen-Cross's Surrebuttal Report. I also reviewed the transcript of Ms. Frederiksen-Cross's June 19, 2020 deposition.

II. MS. FREDERIKSEN-CROSS'S SURREBUTTAL REPORT COMMITS MORE FUNDAMENTAL ERRORS

5. In my Rebuttal Report, I explained that Ms. Frederiksen-Cross's opinions are based on a series of fundamental errors that are repeated throughout her analysis.⁴ Ms. Frederiksen-Cross's Surrebuttal Report purports to respond to these fundamental errors, but her response does not correct the errors, and commits additional errors.

1. FUNDAMENTAL ERROR #1: ACCUSING COPYING OF FILES WITH NO ORACLE INTELLECTUAL PROPERTY

6. In my Rebuttal Report, I explained that Ms. Frederiksen-Cross's opinions are highly misleading because [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].⁷

⁴ R1 Astrachan Rebuttal Rpt., ¶ 30.

⁵ R1 Astrachan Rebuttal Rpt., ¶ 31.

⁶ *Id.* (citing R1 Frederiksen-Cross Opening Rpt., ¶¶ 132, 150, 155, 157–60, 218, 227, 274, 280, 282, 302, 304, 326, 329, 338).

⁷

[REDACTED]. This is not an exhaustive list.

7. Ms. Frederiksen-Cross's Surrebuttal Report does not respond to nearly all of these examples of Fundamental Error #1. This confirms my opinion that this error was pervasive and substantial.

1.1 Ms. Frederiksen-Cross Discusses Issues That I Did Not Contend Were Examples Of Fundamental Error #1, But Are Instead Examples Of Other Fundamental Errors

8. Ms. Frederiksen-Cross's Surrebuttal purports to address [REDACTED]

[REDACTED]
[REDACTED]

9. For example, she opines that “[REDACTED]”

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

10. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁸ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 7.

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11.

Ms. Frederiksen-Cross acknowledged
that Oracle files on multiple clients'

⁹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 47.

¹⁰ To the extent she is opining that this file violates Paragraph 8 of the Injunction restricting the copying of “J.D. Edwards software source code” my opinions on that issue are stated in my Rebuttal Report. R1 Astrachan Rebuttal Rpt., ¶¶ 305–13.

¹¹ R1 Frederiksen-Cross Opening Rpt., ¶ 204.

12 *Id.*

¹³ R1 Astrachan Rebuttal Rpt., ¶ 32.

¹⁴ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 12.

¹⁵ See R1 Astrachan Rebuttal Rpt., ¶ 39 (noting that this tax910au.sqr example is an example of Fundamental Error #3).

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environments often start out the same as delivered from Oracle and then will remain the same or similar after being modified by Rimini.¹⁶

1.2 Ms. Frederiksen-Cross Is Wrong To Claim That I Suggested That The Injunction Is Limited To Literal Copying

12. [REDACTED]

[REDACTED] ■ [REDACTED]. I did not opine that Injunction prohibits only literal copying, and I did not restrict my analysis to literal copying. With respect to the examples of Fundamental Error #1 that I identified in my Rebuttal Report, [REDACTED]

13. [REDACTED]

14. [REDACTED]

¹⁶ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 186–88.

¹⁷ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 19.

¹⁸ *Id.*

¹⁹ See R1 Astrachan Rebuttal Rpt., ¶¶ 42 (Fundamental Error #6), 94 (citing *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 969 (9th Cir. 1992) (“A derivative work must incorporate a protected work in some concrete or permanent form.”)).

²⁰ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 20.

²¹ Ms. Frederiksen-Cross recognized this fact at her June 19, 2020 deposition, acknowledging that such derivative works are authorized where the client has a license. Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 94–96.

(Cont'd on next page)

15.

I disagree; that logic does not follow.

[REDACTED], the evidence shows that any use of Raley's system in development and testing occurred on Raley's computer systems to support Raley's. Ms. Frederiksen-Cross does not contend that Raley's did not require the update, nor that it did not contract for the update. Indeed, Ms. Frederiksen-Cross testified at her recent deposition that she could not recall identifying any update Rimini implemented for a client that the client did not need, and her reports do not identify any.²⁶

²² R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 21.

²³ *Id.* ¶¶ 22–24

24 *Id.* ¶ 24.

25 *Id.* ¶ 25.

²⁶ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 162.

(Cont'd on next page)

1.3 Files Ms. Frederiksen-Cross Contends Contain Oracle Code

16. Of the numerous examples of files on Rimini's systems that I contend reflect her Fundamental Error #1, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17. As explained in my Rebuttal Report, the Dev Instruction for HCM200929 is not substantially similar to the Oracle file taxmmref.sqc.²⁸ The similarities in the code are the result of constraints imposed by the form of Social Security Administration records.²⁹ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁷ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 9.

²⁸ R1 Astrachan Rebuttal Rpt., ¶¶ 183–91.

²⁹ E.g., *id.* ¶ 185.

³⁰ *Id.* ¶¶ 195–202.

³¹ *Id.* ¶ 196.

³² The 49-page Rimini technical specification is Exhibit 41 to Ms. Frederiksen-Cross's *Rimini I* Opening Report.

³³ R1 Frederiksen-Cross Opening Rpt., Ex. 41 at 10.

(Cont'd on next page)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ■ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Ellipses where Oracle
code would have been

20.

[REDACTED] | [REDACTED]

[REDACTED]

[REDACTED] ■ [REDACTED]

[REDACTED]

[REDACTED].

³⁴ R1 Astrachan Rebuttal Rpt., ¶ 297.

³⁵ R1 Frederiksen-Cross Opening Rpt., ¶ 304.

(Cont'd on next page)

Term	Percentage
GMOs	100%
Organic	3%
Natural	10%
Artificial	10%
GMOs	100%
Organic	100%
Natural	100%
Artificial	100%
GMOs	100%
Organic	100%
Natural	100%
Artificial	100%
GMOs	100%
Organic	100%
Natural	100%
Artificial	100%
GMOs	100%
Organic	100%
Natural	100%
Artificial	100%

³⁶ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 13.

³⁷ R1 Astrachan Rebuttal Rpt., ¶ 298.

³⁸ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 15.

(Cont'd on next page)

Term	Percentage (%)
Climate change	100
Global warming	98
Green energy	95
Sustainable development	92
Environmental protection	88
Green economy	85

24.

39 [REDACTED]

⁴⁰ R1 Astrachan Rebuttal Rpt., ¶ 268.

41 R1

⁴³ See *Rimini II*, Rebuttal Expert Report of Professor Owen Astrachan, dated July 13, 2018 (“R2 Astrachan”).

¹⁰ Rebuttal Rpt.”), ¶ 205 (explaining f-

2. FUNDAMENTAL ERROR #2: ACCUSING COPYING WITHIN A SINGLE CLIENT

25. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] ■

26. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

27. [REDACTED]

[REDACTED]
■ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
■ [REDACTED]
[REDACTED]
■ [REDACTED]
[REDACTED]

⁴⁵ *Id.* ¶ 35.

⁴⁶ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 28.

⁴⁷ *Id.*

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

28.

[REDACTED]

29.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

■ ■ ¶ 31.

⁴⁹ R1 Astrachan Rebuttal Rpt., ¶ 318.

3. FUNDAMENTAL ERROR #3: REFERRING TO “COPYING” WHEN TWO FILES ARE MODIFIED SEPARATELY

30.

32.

33.

50 *Id.* ¶ 38.

⁵¹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 33.

52 *Id.*

merely reproducing (from memory or otherwise) its own work product—*e.g.*, its own solution and its own code—that is not a violation of any Injunction prohibition, as I understand it. ■

Country	Percentage (%)
China	~20
Russia	~20
India	~80
Brazil	~80
Mexico	~80
Germany	~90
France	~90
UK	~90
South Korea	~90

34. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

35. [REDACTED]
[REDACTED] I did not limit my understanding of terms such as “distribution,” “sent,” or “provided,” to automated systems. For example, emailing a file manually would commonly be understood to qualify as “sending,” or “providing” it and would also be “distributing” in the non-Copyright-specific sense of the

⁵³ R1 Frederiksen-Cross Opening Rpt., ¶ 205.

54

⁵⁵ R1 Astrachan Rebuttal Rpt., ¶ 40.

⁵⁶ See, e.g., *id.* ¶¶ 40, 178–79, 284, 317.

⁵⁷ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 35.

(Cont'd on next page)

word.⁵⁸ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. [REDACTED]. If two clients have the same file, File X, and Rimini modifies a line of code of File X separately in each client's environment, Rimini did not "send" or "provide" File X to both clients. That file was already in each client's environment. Rimini also did not "send" or "distribute" the modified File X to both clients—most of File X was already there. It would be accurate to say that the *modified line of code* was provided.

37. Some examples of this error include the following. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] There is no evidence that Rimini "distributed" tax910au.sqr; that file existed on client systems originally. Rimini made modifications to the file in each client's environment, separately.

5. FUNDAMENTAL ERROR #5: ACCUSING THE USE OF KNOWLEDGE AND KNOW-HOW

38. [REDACTED]

[REDACTED]

⁵⁸ See R1 Astrachan Rebuttal Rpt., ¶ 315 ("I understand that a 'distribution' under the Copyright Act requires an actual dissemination or transfer of ownership to take place. In other words, the software has to 'change hands,' for example by sale or rental, lease, or lending. I understand that the distribution must also be 'to the public' to violate the Copyright Act.").

⁵⁹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 35.

⁶⁰ R1 Frederiksen-Cross Opening Rpt., ¶ 179.

⁶¹ *Id.*, ¶ 203.

(Cont'd on next page)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

39. I gave a very large number of examples of this, but the example below is particularly instructive. Ms. Frederiksen-Cross was asked at her September 2018 deposition the following question:

Let's say an engineer at Rimini working for client A figures out that a particular table, let's call it [“]state tax table[”], needs to be changed in some way. A different engineer implementing the same fix, the same update for Client B emails the first engineer and says, “Hey, do you know what table will need to be changed to implement this fix?” And the engineer replies, “The state tax table.” Is that cross-use because the name of the table was referenced?

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].”⁶³

40.

[REDACTED]

[REDACTED]

[REDACTED] My point is that the Injunction does not prohibit (nor do Oracle’s license agreements prohibit) re-use of knowledge learned, or the re-use of Rimini’s work product (which is not copyrighted to Oracle). This is not a “carve-out”; it simply is not prohibited.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶² R1 Astrachan Rebuttal Rpt., ¶ 41; *see also id.* ¶¶ 53–66, 159–60, 253–58, 261–62, 271.

⁶³ Deposition of Barbara Frederiksen-Cross, Sept. 19, 2018, pp. 248–50.

⁶⁴ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 37.

(Cont’d on next page)

⁶⁵ At her June 2020 deposition, she was asked the same question and again could not answer.⁶⁶

41.

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⁶⁵ R1 Astrachan Rebuttal Rpt., ¶ 65. She testified that “my solution would be to go and confer with counsel and find out what the legal answer is.”

⁶⁶ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 147–48.

⁶⁷ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 37.

⁶⁸ See R1 Frederiksen-Cross Opening Rpt., ¶¶ 16–17; R1 Astrachan Rebuttal Rpt., ¶¶ 47–53 (explaining the breadth of these assumptions).

⁶⁹ Corrected Supplemental Expert Report of Barbara Ann Frederiksen-Cross, dated June 19, 2018 (“R2 Frederiksen-Cross Supp. Rpt.”), ¶ 217 (emphasis added).

⁷⁰ *Id.* ¶ 715 (emphasis added).

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- Ms. Frederiksen-Cross testified, as quoted above, that it would be “cross-use” for one engineer to tell another engineer that the table that needs fixing is “the state tax table.” She testified “*A. Where the knowledge and use of the first customer’s licensed environment was used to derive that information, the first customer’s license was used to derive that information, it’s my understanding that it’s cross-use for that use of the first customer’s environment to be used* on behalf of a second or different customer for use in that customer’s licensed -- that second customer’s licensed environment.”⁷⁵

⁷¹ R1 Frederiksen-Cross Opening Rpt., ¶ 272 (emphasis added).

⁷² Deposition of Barbara Frederiksen-Cross, Sept. 19, 2018, pp. 233–34 (emphasis added).

⁷³ *Id.* p. 151 (emphasis added).

⁷⁴ R1 Frederiksen-Cross Opening Rpt., ¶ 365 (emphasis added).

⁷⁵ Deposition of Barbara Frederiksen-Cross, Sept. 19, 2018, p. 249 (emphasis added).

(Cont'd on next page)

42. The above are examples, not an exhaustive list. In addition, even *after* her Surrebuttal Report, Ms. Frederiksen-Cross gave deposition testimony again confirming [REDACTED]

⁷⁶ Deposition of Barbara Frederiksen-Cross, Sept. 19, 2018, p. 186 (emphasis added).

⁷⁷ *Id.* at pp. 194–95.

- Ms. Frederiksen-Cross was asked if a Rimini engineer who fixed an issue for Client A could remember his fix and use it for Client B who was encountering the same issue. She responded: “[I]f the engineer **remembered** exactly the code he wrote, exactly what he fixed, exactly where he fixed it, and **he relied on that very specific knowledge and detailed knowledge** to re-create that update for another customer, then it would be my understanding that because he’s relying on the work done in the system of Client A to identify the change and to implement the change and to test the change when he goes to Client B with the certainty that that is the change required that that would be impermissible.”⁷⁸
- She also testified: “[E]ven just the act of testing that – or developing the fix in the first place and then testing it so that you know this is the fix, **when you transport that knowledge** to another environment, you may be running through the same set of tests, but you’ve already benefited from the fact of developing that test – or developing that test plan of what to test and what not to test and how to test it and what specific steps to take in the test.”⁷⁹
- She also testified that “cross-use” does not depend on any time savings, but occurs when “using the benefit of the **knowledge** gained on Client A’s system when you develop that update, then applying that for the benefit of the another customer when you apply that update elsewhere.”⁸⁰

43. These are non-exhaustive examples. The essence of Ms. Frederiksen-Cross’s testimony was that any knowledge gained by a Rimini engineer in performing a fix for Client A could never be reused because then Client B would “benefit” from Rimini’s knowledge.

44. [REDACTED]

[REDACTED]

⁷⁸ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 130–31.

⁷⁹ *Id.* p. 166.

⁸⁰ *Id.* p. 118.

⁸¹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 38.

(Cont’d on next page)

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] When the Rimini developer is using Client A's environment and making modifications and performing testing to implement Rimini's update, he is using Client A's environment to support Client A, which complies with the Injunction. When he documents the solution, including any Rimini-written code, that does not violate the Injunction because Rimini's work product is not Oracle software and documentation (nor is it copyrighted to Oracle). And when Rimini solves the same problem for subsequent clients in those clients' environments, its use of each client's software is to support that client. This is consistent with the Injunction.

46. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸² *Id.* Additional non-exhaustive examples of Ms. Frederiksen-Cross committing this error are the following paragraphs of her Opening Report: 40–45, 208–11, 231–66, 272–77, 288–89, 298–304, 348, 365, 374.

⁸³ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 38.

⁸⁴ E.g., R1 Astrachan Rebuttal Rpt., ¶¶ 248–59.

⁸⁵ See, e.g., Deposition of Barbara Frederiksen-Cross, Sept. 19, 2018, p. 151 (“you were applying that knowledge in the second environment, then I would say yes, you’re cross using that knowledge”).

(*Cont’d on next page*)

■ In fact, as I stated in my Rebuttal Report, Oracle’s expert at trial in *Rimini I* testified that an example of conduct that was not “cross-use” is having “one dev[elopment] environment for every client who is using the software”⁸⁷—*i.e.*, precisely the conduct Rimini engages in now under Process 2.0.

47.

.⁹⁰ So long as

the solutions written down are Rimini work product and Rimini knowledge, and do not substantially incorporate protected expression from Oracle works, the Injunction, as I understand it, does not prohibit using that solution and knowledge.

⁸⁶ See R1 Astrachan Rebuttal Rpt., ¶¶ 143–60. Ms. Frederiksen-Cross does not respond to any of these opinions in her Surrebuttal Report.

⁸⁷ Trial Tr. at pp. 204–05.

⁸⁸ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 39.

⁸⁹ R1 Frederiksen-Cross Opening Rpt., ¶ 277; R1 Astrachan Rebuttal Rpt., ¶ 280.

⁹⁰ Ms. Frederiksen-Cross recognizes this by acknowledging that there is no difference between “taking highly-detailed notes” and “memorization.” R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 39.

(Cont'd on next page)

48. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. FUNDAMENTAL ERROR #6: MISREPRESENTATION OF DERIVATIVE WORKS

49. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

50. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] It is not my understanding that a work must contain literal copying to be a derivative work, and I did not say that in my reports. However, to be a derivative work, a work must “substantially incorporate protected material” from the prior work. There could be ways to substantially incorporate protected material through non-literal copying. [REDACTED]

[REDACTED]

51. [REDACTED]

[REDACTED]

[REDACTED] as I said in my Rebuttal Report in *Rimini II*, that

⁹¹ *Id.* ¶ 41.

⁹² R1 Astrachan Rebuttal Rpt., ¶ 190.

⁹³ See *id.* ¶ 42; *Lewis Galoob Toys, Inc. v. Nintendo of Am., Inc.*, 964 F.2d 965, 969 (9th Cir. 1992) (“A derivative work must incorporate a protected work in some concrete or permanent form.”).

⁹⁴ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 44 (underlining added).

(Cont'd on next page)

the Ninth Circuit has stated that “[t]he statutory language is hopelessly overbroad.”⁹⁵ Therefore, I understand the Ninth Circuit has stated that “[t]o narrow the statute to a manageable level, we have developed certain criteria a work must satisfy in order to qualify as a derivative work” including that it “must substantially incorporate protected material from the preexisting work.”⁹⁶

52.

That is simply wrong; the Windows version of PeopleSoft cannot run independently of Windows.

[REDACTED] . I do not see any reference to “updates” or “wholly independent programs” in the copyright statute, [REDACTED]

7. FUNDAMENTAL ERROR #7: MISREPRESENTING INJUNCTION PROHIBITIONS

53. I explained in my Rebuttal Report that the Injunction does not contain any restriction that JD Edwards software (as opposed to PeopleSoft software) be used only on the "client's own computer systems." [REDACTED]

[REDACTED], as though that is a violation, even though it is not.⁹⁸

⁹⁵ R2 Astrachan Rebuttal Rpt., ¶ 64 (quoting *Micro Star v. Formgen Inc.*, 154 F.3d 1107, 1110 (9th Cir. 1998)).

⁹⁶ *Micro Star v. Formgen Inc.*, 154 F.3d at 1110.

⁹⁷ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 45.

⁹⁸ R1 Astrachan Rebuttal Rpt., ¶ 44.

54. [REDACTED]

[REDACTED] which was highly misleading because prvtsidx.plb is not a PeopleSoft file and the Injunction contains no prohibition on the presence of JD Edwards files on Rimini's systems.

55. [REDACTED]

[REDACTED] The presence of that file on Rimini's systems does not alone violate the Injunction because there is no "own computer systems" restriction in the Injunction for JD Edwards. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] ¶⁹ But there is no evidence to support that statement. [REDACTED]

III. MS. FREDERIKSEN-CROSS'S NEW OPINIONS REGARDING CLOUD ENVIRONMENTS ARE TECHNICALLY UNSOUND AND SPECULATIVE

56. [REDACTED]

[REDACTED] ■ This is incorrect. The reason I have previously discussed the similarities between local and cloud hosting is to underscore that, with respect to the issue of *control*, there is no significant difference between a client's ability to exercise control over software when using either hosting model.

57. [REDACTED], the Ninth Circuit held that it is "necessary to read a requirement of 'control' into the definition of '[a licensee's] facilities.'"¹⁰¹ In my Rebuttal Report, I opined that there is "no practical difference from a technical perspective" between how

⁹⁹ R1 Frederiksen-Cross Opening Rpt., ¶ 48.

¹⁰⁰ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 50.

¹⁰¹ *Oracle USA, Inc. v. Rimini St., Inc.*, 879 F.3d 948, 960 (9th Cir.).

a client or its representatives access software stored in the cloud or on a local server. In either case, the client (or client’s representative) must possess login credentials that allow it to access the server and/or virtual machine. Even where a client has possession or control over the physical space where a server is located, or the physical equipment itself, such *physical* access and control does not equate to any meaningful access to the software stored on the server. Conversely, where a client has control over the software, it is irrelevant for practical purposes who owns the physical hardware or the building in which it is housed, or the land on which the building sits.

58. I [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] During her deposition, Ms.

Frederiksen-Cross asserted that a virtual machine could not constitute a client’s “own computer systems.”¹⁰⁴ This assertion is based on her “understanding” that a computer system can only be comprised of “a computer or server”—in other words, the physical hardware components.¹⁰⁵

59. As a technical matter, I disagree that a “computer system” can only include physical hardware. As Ms. Frederiksen-Cross conceded, a virtual machine is a “very smart piece of software” that “can provide services comparable . . . or perhaps even almost identical to those provided by a particular computer system.”¹⁰⁶ There is no technical reason why a virtual machine that offers these services and belongs to the client cannot be part of the client’s “own

¹⁰² R1 Frederiksen-Cross Opening Rpt., ¶ 14.

¹⁰³ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 52.

¹⁰⁴ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 213–14, 230–31.

¹⁰⁵ *Id.* p. 212.

¹⁰⁶ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 213.

computer systems”; the virtual machine is a “system” that provides computing services and functionality. I thus see no technical rationale for excluding a virtual machine owned by a client from the client’s “own computer systems.”

60. [REDACTED]

[REDACTED] would produce absurd results. During her deposition, she was asked to opine on this hypothetical:

Q. . . Assume you own everything. You own the land. You own the building. You own the physical server. And you rented out -- you rent out the ability to someone to have a virtual machine on your server. And you give them remote access to that virtual machine. They change the admin, the root password for that virtual machine. You can no longer access that virtual machine. . . . [W]hose computer system is that virtual machine, if anyone’s?”¹⁰⁷

Ms. Frederiksen-Cross responded that the first party would own “the computer system,” (the server, according to her definition) and the second party would own the virtual machine, but ownership over the virtual machine would not “change who owns the computer system.”¹⁰⁸ In other words, even though the first party could not access the virtual machine or the software stored in it, and only the second party could do so, Ms. Frederiksen-Cross would still consider the virtual machine to be part of the first party’s (and not the second party’s) “own computer system” because the first party had physical possession of the server. This result would make little sense if the purpose of the “own computer systems” restriction is to protect Oracle’s intellectual property rights in the software.

61. [REDACTED]

[REDACTED]¹⁰⁹ Ms. Frederiksen-Cross conceded at her deposition that there are a number of different forms of control that an entity could possess over a cloud account, including the ability to access the virtual machine, to turn the virtual machine on and off, open and close networking ports, configure the virtual machine, create and delete user accounts, set user

¹⁰⁷ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 228.

¹⁰⁸ *Id.* at 229–30.

¹⁰⁹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 52.

(Cont’d on next page)

permissions, move the virtual machine to a different sever, and create or delete the virtual machine.¹¹⁰ But when asked what the basis was for her opinion that Rimini has “entire control” over client’s Windstream virtual machines, Ms. Frederiksen-Cross referred only to the deposition testimony of a Rimini client in which the client asserted that the client does not have access to the software environment located within its Windstream virtual machine.¹¹¹ Ms. Frederiksen-Cross conceded that she did not perform any analysis of access control lists for Windstream environments in her *Rimini I* expert reports to verify this claim from a technical perspective.¹¹² And, with respect to the other forms of control, she conceded that she performed no technical analysis; she did not analyze network configurations, client machine configurations, folder permissions, or other permissions associated with clients’ virtual machines for the post-injunction period.¹¹³ Given that all of these can be forms of control over a virtual machine, [REDACTED]

[REDACTED] in my opinion Ms. Frederiksen-Cross does not have any reliable technical basis to conclude that Rimini has “primary, if not exclusive” control over client’s virtual machines.

62. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED] During her deposition,

Ms. Frederiksen-Cross admitted that she was not offering an opinion “specifically on Oracle or PeopleSoft’s motives” regarding the inclusion of the facilities restriction in some legacy

¹¹⁰ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 235–45.

¹¹¹ *Id.* pp. 254–55.

¹¹² *Id.* pp. 255–56. Ms. Frederiksen-Cross appears to be referring to the 30(b)(6) deposition testimony of Easter Seals. As I noted in my Rebuttal Report, Easter Seals’ representative testified that even though Easter Seals does not “physically use” the environments hosted on Windstream, those environments are “for Easter Seals,” and that Rimini uses those environments “to support Easter Seals” “[f]or our benefit,” which is why Easter Seals hired Rimini. R1 Astrachan Rebuttal Rpt., ¶ 171; Deposition of Jay Hoyt (Easter Seals), Sept. 20, 2019, pp. 122–23.

¹¹³ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 256–58.

¹¹⁴ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 53.

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PeopleSoft license agreements.¹¹⁵ She also conceded that she did not speak with any of Oracle’s “technical people” about her assertions regarding the cloud and security. Instead, she was attempting in her Surrebuttal Report to give “some technical background about . . . [w]hy some of those considerations *might* be something that a licensor of software *might* want to consider.”¹¹⁶ She acknowledged that she is not an expert in ERP software licenses.¹¹⁷

63. [REDACTED]

[REDACTED] It is not clear what relevance such speculation has to the technical issues in this proceeding; asserting that cloud computing configurations may have security vulnerabilities—even if accurate—does not make a cloud account less likely to be a client’s “own computer systems.” I [REDACTED]

[REDACTED] I disagree with them as a technical matter, as follows.

64. [REDACTED]

[REDACTED] However, this is not a cloud-specific issue; instead, encryption measures are standard whenever sensitive data is sent over the Internet, which could occur in any number of circumstances. It is common, for example, for a company to have a remote data center with servers that are accessed via the Internet. It is also common for employees to work from home and remotely connect to a company’s software resources over the Internet. If a reasonable licensor wanted to avoid any

¹¹⁵ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 260.

¹¹⁶ *Id.* pp. 260–61.

¹¹⁷ *Id.* p. 258.

¹¹⁸ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 54.

obligation to provide encryption—an implausible expectation in the Internet age—a restriction that prevented use of cloud services provided by a third party, but not all other access to the software over the Internet, would make little sense.

65. [REDACTED]

[REDACTED]

[REDACTED] But as discussed above, physical access to hardware does not equate to access to software. Moreover, this same supposed concern would apply to *any* third party with physical access to servers where software is stored. [REDACTED]

[REDACTED] no provision in the license agreements at issue here that prohibits, for example, third-party vendors from accessing servers stored within a client's own building to provide hardware maintenance or service.

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] " ¹²⁰ Her contention is a red herring. Ms. Frederiksen-Cross testified in her deposition that the facilities restriction prevents cloud hosting regardless of whether the licensee owns the server exclusively, or uses a multitenant model.¹²¹ In any event, it is little more than an assertion that security measures can fail, a truism that is obviously not limited to cloud computing. Of course, a multitenant hosting provider's business model depends on ensuring that clients' data and software stay siloed—few software users would be interested in a hosting solution where the vendor could not guarantee as much.¹²² And while it is true that measures taken by a hosting vendor could, in theory, fail, the same is true of any

¹¹⁹ *Id.* ¶ 55.

¹²⁰ *Id.* ¶ 56.

¹²¹ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 223 ("My understanding based on the guidance I was given by counsel about what 'facilities' means is that just controlling the presence of your computer in somebody else's rack in somebody else's building on somebody else's land probably does not rise to that level of owning or leasing that's required based on the understanding I was given of this facilities clause.").

¹²² For example, Windstream's corporate representative testified that Windstream ensures that different users who host software in virtual machines on a Windstream multitenant server are not able to access each other's virtual machines. 30(b)(6) Deposition of Jeff Waide, Oct. 17, 2019, p. 36. As he explained, "no customer would subscribe to us if they believed other customers had access to their computing infrastructure and they wouldn't want access to anybody else's stuff. So everybody, for security reasons, would need to be kept separate."

security measures taken by any software user. Indeed, software in a multitenant cloud hosting arrangement could be, and often is, significantly *more secure* than software on a client's local server (for instance, where the client's security measures are substandard). The concern that security may fail is not a rationale for prohibiting cloud use; if anything, it is a rationale for encouraging better security practices regardless of the hosting model employed.

IV. MS. FREDERIKSEN-CROSS CONTINUES HER ERRORS WITH RESPECT TO RIMINI'S JD EDWARDS SUPPORT SERVICES

67. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

68. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 3 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] As noted above, this document contains a small handful of markers, with ellipses where Oracle code would be, for the purpose of providing guidance on where in the Oracle file a Rimini developer should include Rimini-developed code (and not for the purposes

¹²³ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 59.

of copying Oracle code between different clients).

69.

70.

¹²⁴ R1 Frederiksen-Cross Opening Rpt., ¶ 296.

¹²⁵ R1 Astrachan Rebuttal Rpt., ¶ 290.

¹²⁶ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 60.

71. Ms. Frederiksen-Cross had access to a large number of JD Edwards updates developed by Rimini, [REDACTED]

[REDACTED]

[REDACTED]

72. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] This is Fundamental Error #5.

**V. MS. FREDERIKSEN-CROSS'S OPINION
REGARDING DISPLAY ADAPTER MEMORY IS ERRONEOUS**

73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED].

74. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ■ Ms. Frederiksen-Cross

also testified during her deposition that it was her opinion that Rimini's practice of remotely connecting to a client's systems to perform development and testing work on a PeopleSoft file

¹²⁷ R1 Frederiksen-Cross Opening Rpt., ¶ 197.

¹²⁸ R1 Astrachan Rebuttal Rpt., ¶ 209.

¹²⁹ R1 Frederiksen-Cross Surrebuttal Rpt., ¶ 71.

creates two “reproductions” or “derivative works” in violation of the Injunction: (1) a reproduction of the content of the file within the display adapter memory and (2) a reproduction in the light emitted by the Rimini developer’s computer monitor.¹³⁰ I continue to disagree with Ms. Frederiksen-Cross’s opinions.

75. A computer monitor displays images by emitting light from pixels in its screen. When viewed by the human eye, the light emitted by the pixels can combine to form an image of text (including, for example, an image of code). The pixels emit light based on color and brightness values that are assigned to each pixel. Data relating to these pixels may be present in display adapter memory, but only for exceedingly brief periods of time, on the order of hundredths or thousandths of a second. [REDACTED], refresh rates for computer monitors are generally 60 times per second or higher.¹³¹ This means that, 60 times every second, the pixel data in the display adapter memory are overwritten by new values as the user opens and closes files and applications; minimizes, maximizes, and rearranges windows; scrolls content within particular windows; types characters; and even moves the mouse cursor. In other words, the pixels displayed—and the data representing those pixels in display adapter memory—are constantly changing as the user interacts with the elements on the screen. Moreover, the display adapter memory does *not* contain the software being run or any files that are open. Rather, it contains only data relating to pixel color and brightness for what is being currently displayed on the Rimini engineer’s screen, and even then, only the outermost, user-visible elements. Thus, for example, if a monitor screen is displaying two overlapping windows, the display adapter memory may temporarily contain pixel data for the portions of the windows that are currently visible (and not the portion of the window that is “behind” the other overlapping window). And, as soon as the user closes, scrolls down, or minimizes a file on the monitor, the pixel data stored in the adapter memory adjusts accordingly. [REDACTED]
[REDACTED]

76. When a Rimini developer remotely connects to a client’s system and views a client’s Oracle file, the Oracle code is not reproduced in the display adapter memory. Instead, as

¹³⁰ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 289–91.

¹³¹ *Id.* p. 293.

explained above and in my Rebuttal Report, the display adapter memory merely contains data relating to the color and brightness for the pixels that make up whatever is being represented on the screen for that instant in time.

77. I understand that, under the Copyright Act, a “copy” is a “material object[. . .] in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.”¹³² I further understand that to be “fixed,” the work must be “sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.”¹³³ I further understand that, to be a derivative work, a new work must incorporate a protected work in some “concrete or permanent form.”¹³⁴

78. From a technical perspective, in my opinion the Oracle *code* (as textual code) viewed by a Rimini developer connecting remotely to a client machine is not reproduced in the display adapter memory. The data relating to pixel brightness and color in the display adapter memory (in order to project an image of what is occurring on the screen, including all windows, menus, icons, etc.) are not the same as, nor substantially similar to, the actual Oracle code in the file that remains on the client’s system. Moreover, even if this data were properly described as a reproduction of the Oracle code, they are not “fixed” in a “permanent,” “stable,” or “concrete” form. To the contrary, they are highly transitory and unstable because they are refreshed at a rate of 60 times per second or more. Moreover, as soon as a developer closes an Oracle file or minimizes the window displaying it, the data associated with the display of the Oracle file are overwritten.

79. My opinion is the same with respect to the display of content on a Rimini engineer’s computer monitor. The text displayed on a monitor screen is not “fixed” in the pixels or the screen, or any other tangible medium. Rather, the image of the text [REDACTED]

¹³² 17 U.S.C. § 101 – Definition of “Copies”

¹³³ 17 U.S.C. § 101 – Definition of “Fixed”

¹³⁴ *Micro Star v. Formgen Inc.*, 154 F.3d 1107, 1110 (9th Cir. 1998).

(Cont’d on next page)

[REDACTED] Like display adapter pixel values, photons emanating from pixels are not “permanent,” “concrete,” or “stable.” Instead, they are inherently impermanent and intangible.¹³⁶

80. [REDACTED]

[REDACTED] As one example, if it were correct that pixel values in display adapter memory, or the light emanating from those pixels, could constitute a “copy” of protected expression, then any viewing of a copyrighted work via an Internet browser would create (likely unauthorized) reproductions of that work, even without any browser caching or downloading activity.

81. [REDACTED]

[REDACTED] At trial, Mr. Allison testified on direct examination that a third party would be authorized to “dial in remotely to the customer’s facility and access and use the software that way.”¹³⁷ Mr. Allison further testified that where a licensee has a facilities restriction in its PeopleSoft license—which would prevent copying of the software outside the licensee’s facilities—the licensee’s employees were still allowed to remotely access and copy the software from their homes even though the employees’ homes would not, in Oracle’s view, qualify as the licensee’s facilities. Mr. Allison explained that this is because the employee is “accessing and using it remotely, but the running of the software, the copy of the software, that’s all at the customer’s facility, and that’s where it’s actually being run.”¹³⁸ That was a technologically correct statement by Mr. Allison—the software, including RAM copies, exists only on the customer’s computer. Ms. Frederiksen-Cross’s opinions, on the other hand, are directly at odds with Mr. Allison’s testimony. During her deposition, she

¹³⁵ Deposition of Barbara Frederiksen-Cross, June 19, 2020, p. 291.

¹³⁶ Ms. Frederiksen-Cross appeared to admit that screen images of Oracle code on a monitor are not permanent or “fixed” during her deposition, when she suggested that a developer could use “screen capture software” to “actually record that entire section and create a permanent record of that code on the machine.” *Id.* pp. 287–88. In other words, to fix the image of the code in a permanent form, the developer would have to take an additional step: using screen capture software that would save a copy of the image to the disk.

¹³⁷ Trial Tr., pp. 839, 846.

¹³⁸ Trial Tr., pp. 1061–62.

(Cont’d on next page)

testified that because remote access to Oracle software supposedly creates actionable copies of the software on the machine performing the remote access, a client with a facilities restriction in its PeopleSoft license would violate the restriction if the client's employee accessed the software from the employee's home.¹³⁹

¹³⁹ Deposition of Barbara Frederiksen-Cross, June 19, 2020, pp. 284–86.